

1. - 19. Canceled

20. (Currently Amended) A kit comprising ~~a solid support selected from the group consisting of a solid support that comprises:~~

a) a solid support comprising a capture probe and one or more target capture probes linked to the solid support at the 3' terminus directly or with spacers, one or more target capture extenders with blocked 3' termini and sequences complementary to a sequence on a target capture probe and ~~a~~ an unamplified target nucleic acid molecule, and a discrimination extender with an unblocked 3' terminus ~~that~~ and a sequence complementary to a sequence on a capture probe and ~~a~~ the target nucleic acid molecule wherein the nucleotide at the 3' terminus of the discrimination extender is complementary to a single nucleotide polymorphism position of an allele; or

b) a solid support comprising a capture probe and one or more target capture probes linked to the solid support at the 5' terminus directly or with spacers, one or more target capture extenders with unphosphorylated 5' termini and sequences complementary to a sequence on a target capture probe and ~~a~~ an unamplified target nucleic acid molecule, and a discrimination extender with an unphosphorylated 5' terminus and a sequence complementary to a sequence on a capture probe and ~~a~~ the target nucleic acid molecule wherein the nucleotide at the 5' terminus of the discrimination extender is complementary to a single nucleotide polymorphism position of an allele; or

c) a solid support comprising a capture probe linked to the solid support at the 3' termini directly or with spacers, one or more target capture probes with blocked 3' termini and linked to the solid support at the 5' terminus directly or with spacers, one or more target capture

extenders with blocked 3' termini and sequences complementary to a sequence on ~~a~~ the target capture probe and ~~a~~ an unamplified target nucleic acid molecule, and a discrimination extender with an unblocked 3' terminus and a sequence complementary to a sequence on a capture probe and ~~a~~ the target nucleic acid molecule wherein the nucleotide at the 3' terminus of the discrimination extender is complementary to a single nucleotide polymorphism position of an allele; ~~and-or~~
~~combination~~ combinations thereof.

21. (Original) A kit of claim 20 wherein the solid support comprises more than one different capture probe that hybridizes to different discrimination extenders, each different capture probe spatially separated at identifiable locations and different discrimination extenders having termini complementary to a single nucleotide polymorphism position of an allele of different genes.

22. (Currently Amended) A solid support selected from the group consisting of:

a) a solid support comprising a discrimination probe linked to the solid support at the 5' termini directly or with spacers, one or more target capture probes with blocked 3' termini and linked to the solid support at the 5' termini directly or with spacers, wherein a sequence of a target probe is complementary to a sequence on a target nucleic acid molecule and a sequence on the discrimination probe is complementary to a sequence on the target nucleic acid molecule wherein the nucleotide at the 3' terminus of the discrimination probe is unblocked and complementary to a single nucleotide polymorphism position of an allele, and wherein the target nucleic acid molecule has not been amplified;

b) a solid support comprising a discrimination probe linked to the solid support at the 3' termini directly or

with spacers, one or more target capture probes with unphosphorylated 5' termini and linked to the solid support at the 3' terminus directly or with spacers, wherein a sequence of a target probe is complementary to a sequence on a target nucleic acid molecule and a sequence on the discrimination probe is complementary to a sequence on the target nucleic acid molecule wherein the nucleotide at the 5' terminus of the discrimination probe is phosphorylated and complementary to a single nucleotide polymorphism position of an allele, and wherein the target nucleic acid molecule has not been amplified; ~~and~~ or combinations thereof.

23. (Original) A solid support of claim 22 wherein the solid support comprises more than one different discrimination probe, each different discrimination probe spatially separated at identifiable locations and different discrimination extenders having termini complementary to a single nucleotide polymorphism position of an allele of different genes.

24. - 31. Cancelled